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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,866	11/18/2003	Joerg Kruse	8317-PA01CP	5606

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EXAMINER
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CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/715,866	<b>Applicant(s)</b> KRUSE, JOERG	
	<b>Examiner</b> Carrillo Sharidan	<b>Art Unit</b> 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 17-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-24 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>06122004</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-16, drawn to a method, classified in class 134, subclass 22.1.
  - II. Claims 17-24, drawn to an apparatus, classified in class 134, subclass 166C.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another and materially different process such as flushing coil pipes of a heat exchanger.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Ms. Katherine Proctor on 3/9/2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-4 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimelt (5950681) in view of McCune (3139704).

Reimelt teaches a process for renovating pipes. The process involves drying the pipe with preheated air then drawing the abrasive agents through the pipe, then coating the inner wall of the pipe with a metered quantity of coating material. All of the steps include the application of a suction to an end of the pipe. Reimelt fails to teach the second flowrate at the second port (outlet) being faster than the input flow rate. Reimelt however does teach that the force at which the abrasive particles are torn away increases towards the outlet of the pipe. McCune teaches cleaning a pipe with an abrasive mixture followed by coating of the interior of the pipe. In col. 6, lines 50-68, McCune teaches increasing the efficiency of the process by increasing the outlet

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velocities. The higher outlet velocities scour the pipe's interior more efficiently than the lower velocity. Col. 8, lines 15-35 teaches increasing the outlet velocities. It would have been obvious to a person of ordinary skill in the art to have modified the method of Reimelt to include an increased outlet velocity as taught by McCune, for purposes of increasing the efficiency at which cleaning occurs. Additionally, it would have been within the level of the skilled artisan to increase the velocity in the piping since the effectiveness of the blasting with the abrasive is directly proportional to the velocity at which the abrasive strikes the contaminants present in the interior surface of the piping. In reference to claims 2-3, refer to col. 2, lines 53-57, col. 6, lines 1-17, col. 8, lines 15-31. In reference to claim 4, refer to the abstract of Reimelt. In reference to claim 9, refer to col. 4, lines 18 of Reimelt. In reference to claim 10, refer to the abstract of Reimelt. In reference to claim 11, refer to col. 3, lines 30-45 of Reimelt. In reference to claims 12-13, refer to col. 3, lines 1-9. In reference to claim 14, refer to col. 4, lines 35-40, col. 4, lines 50-51 of Reimelt. In reference to claim 15, Reimelt fails to teach disconnecting the piping and cleaning a second pipe section. However, it would have been well within the level of the skilled artisan to clean any section of a piping since Reimelt teaches using the claimed method for cleaning a variety of different piping.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reimelt (5950681) in view of McCune (3139704), as applied to claims 1-4 and 9-15 as described in paragraph 7 above, and further in view of Naf (5499659).

Reimelt teaches coating with a resin or synthetic resin, but fails to specifically

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recite an epoxy resin. Naf teaches a method of repairing a conduit by cleaning with an abrasive substrate followed by coating with an epoxy resin. It would have been obvious to a person of ordinary skill in the art to have modified the method of Reimelt to include epoxy resin, as taught by Naf, which are conventionally used for repairing and renovating interior surfaces of conduits.

9. Claims 6-8, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimelt (5950681) in view of McCune (3139704), as applied to claims 1-4 and 9-15 as described in paragraph 7 above, and further in view of Yamamoto et al. (4419163).

Reimelt in view of McCune teaches the invention substantially as claimed with the exception of coating the piping with a gas/liquid mixture. Yamamoto et al. teach a pipeline coating method. Yamamoto teaches applying a liquid sealant with compressed air, as a carrier gas, for coating the inner surface of a pipe. It would have been obvious to a person of ordinary skill in the art to have modified the method of Reimelt to include a gas/liquid mixture, as taught by Yamamoto, for purposes of repairing a pipe by coating the inner surface therein.

In reference to claim 7, refer to col. 4, lines 21 of Reimelt. In reference to claim 8, refer to col. 4, lines 36-39 of Reimelt. In reference to claim 16, Reimelt fails to teach disconnecting the piping and cleaning a second pipe section. However, it would have been well within the level of the skilled artisan to clean any section of a piping since Reimelt teaches using the claimed method for cleaning a variety of different piping.

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Browning teaches a high velocity stream. Shinno and Koga teach a method for lining the inner surface of a pipe. Naf teaches cleaning the interior of conduits. Mueller teaches cleaning and coating piping. Abbott teaches a hose cleaning system. Bailey teaches cleaning with high pressure liquid. Nadarajah teaches repairing a pipe. Kruse teaches a pipe renovating system. Shiraishi teaches flushing of coil pipes.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo  
Primary Examiner  
Art Unit 1746

bsc

  
SHARIDAN CARRILLO  
PRIMARY EXAMINER